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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,771	07/25/2003	Patrick Duvaut	060707-1470	1848
24504 7590 09/18/2007 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			EXAMINER TSE, YOUNG TOI	
			ART UNIT 2611	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/626,771

Applicant(s)

DUVAUT ET AL.

Examiner

YOUNG T. TSE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 16-21 and 32-37 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 22-25 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 5, 11-15 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20070326 3/8/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on June 22, 2007 have been fully considered but they are not persuasive.
2. Regarding claim 1 or claim 22, Applicants argue Kim fails to show or teach the steps of **transmitting handshake signaling** from the HSTU-C to the HSTU-R via a first subset of carrier sets **at a first symbol rate**; and **transmitting handshake signaling** from the HSTU-C to the HSTU-R via a second subset of carrier sets **at a second symbol rate**, the second symbol rate being less than the first symbol rate. The examiner respectfully disagrees, as pointed out by the Applicants on page 18 of the remarks or described on page 2, lines 13-21 in the background of the present invention. **Prior to any transmission of actual data** between the central office ADSL transceiver unit (ATU-C) and the remote ADSL transceiver unit (**ATU-R**), **the two entities must first undergo an initialization procedure** designed to familiarize the two entities with each other, identify the bandwidth capabilities for the current session, and further facilitate the establishment of a valid connection. Pursuant to ADSL standards provided by the International Telecommunication Union—Telecommunication Standardization Sector (ITU-T), these initialization procedures comprise the following: 1) **a handshake procedure**; 2) a transceiver training session; 3) a channel analysis session; 4) an exchange session; and finally 5) an actual data transmission session commonly referred to as "showtime." Therefore, it is well known to a person skilled in the

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art that the ATU-C must include handshake signals transmitted to the ATU-R, for example, via different sunsets of carrier sets at different symbol rates. In other words, after the initialization procedures, the data is processed in Kim's communication system using low data rate and high data rate.

Information Disclosure Statement

3. The information disclosure statement filed March 08, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Only the international search report of the PCT/US03/23105 filed on March 26, 2007 has been recited.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 6, 10, 22, 27 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim U. S. Patent No. 6,847,679.

Kim discloses an ADSL network in Fig. 2 comprising an ADSL adapter 20 having 20-30 numbers of ADSL transmission unit-centrals (ATU-C) 22 and a plurality of ADSL transmission unit-remotes (ATU-R) 30 corresponding to the ATU-C 22.

Fig. 3 shows a detailed view for illustrating a modulation and transmission section of the symmetric digital subscriber line transmitter/receiver in Fig. 2.

Fig. 4 shows a detailed view for illustrating a demodulation/receiving unit of the asymmetric digital subscriber line transmitter/receiver in Fig. 2.

With respect to claims 1 and 22, as shown in Figs. 2-4, the ADSL network performs the operation of: transmitting handshake signaling from the ATU-C 22 to the ATU-R 30 via a first subset of carrier sets (32, 34, 36) at a first symbol rate; and transmitting handshake signaling from the ATU-C 22 to the ATU-R 30 via a second subset of carrier sets (31, 33, 36) at a second symbol rate, the second symbol rate (64 kb/s) being less than the first symbol rate (640 kb/s or 6 Mb/s). See column 4, line 39 to column 6, line 30.

With respect to claims 6 and 27, inherently, the second subset of carrier sets includes carrier sets with noise greater than noise present in the first subset of the carrier sets because the second symbol rate of the second subset of carrier sets being less than the first symbol rate of the first subset of the carrier sets.

With respect to claims 10 and 31, the ATU-C 22 and the ATU-R 30 are in bidirectional communication via a TCM-ISDM network because the low signals are

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received from the POTS and ISDN networks through terminals V_{CH1} and V_{ch2} , which is well known to a person skill in the ASDL communication system. See column 1, lines 11-22 and column 4, lines 60-65.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2-4, 7-9, 23-25 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim as applied to claims 1 and 22 in view of the prior art discussion of the instant application.

With respect to claims 2-4 and 23-25, although Kim does not teach that the first symbol rate is 539.0625 symbols per second and the second symbol rate is 269.53125

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symbols per second. The instant application described in the description of the related prior art that the first symbol rate of 539.0625 symbols per second and the second symbol rate of 269.53125 symbols per second being used in ADSL communication system. Therefore, it would have been obvious to one of ordinary skill in the art to use specific symbols rates or different symbol rates in Kim's low and high channels which is also the choice of design to select the symbols rates in the channels in order to achieve the goal of transmitting two different transmission rates in the ADSL communication system.

With respect to claims 7 and 28, the instant application described in the description of the related prior art and which is also well known to a person skill in the art to know that the noise interference used in an ADSL communication system includes near end cross talk or far end cross talk.

With respect to claims 8-9 and 29-30, the instant application described in the description of the related prior art that the second subset of carrier sets, such as, provide by a Fourier transformer, includes a carrier set C43 and/or A43. Therefore, it would have been obvious to one of ordinary skill in the art that the second subset of carrier sets provided in Kim's IDFT 36 and/or DFT 43 includes a carrier set C43 and/or A43.

Allowable Subject Matter

9. Claims 16-21 and 32-37 are allowed.
10. Claims 5, 11-15 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

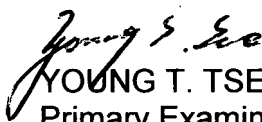
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


YOUNG T. TSE
Primary Examiner
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